22 July 1955

25X1

APD Progress Report on Masonry Drilling

I. Wall Drilling

A. Diamond Core Drills

1. APD representative contacted National Bureau of Standards, Industrial Division, Mineral Products Laboratory.

a. NBS demonstrated diamond core drilling in concrete.

2. APD informed Engineering Division of NBS contact and passed information on diamond core drills to ED for their pipe pusher project at [redacted] 25X1

B. Ultra Sonic Drilling

1. APD presented problem to NBS.

a. NBS's opinion was that ultra sonic drilling in non-homogenous material was not too feasible and very inefficient.

b. APD possesses a report of a study of ultra sonic drilling made by Wilhem Lehfeldt, a German, which substantiates NBS's opinion.

C. Hi-Temperature Heating

1. APD obtained a report prepared at [redacted] 25X1 for ONR on the use of hi-temperature torches for drilling. The report wasn't promising, but was called to the attention of CD.

D. Composite head tool

1. Mr. Wildhack, Office of Basic Instrumentation, NBS, has proposed a composite head-burning, quenching, drilling tool. NBS is very interested in such a device. This information has been given to CD and direct contact between CD and OBI will be set up.

E. Ultra Sonic Drilling Proposal

E. Ultra Sonic Drilling Proposal

1. [redacted] has submitted a proposal for the evaluation of noiseless drilling methods and the development of the most promising method. 25X1

a. [redacted] proposes to: 25X1

(1) Examine all possible solutions

(2) Test to determine best method

(3) Develop and deliver a useable piece of field equipment

b. Proposal will be submitted to Masonry Drilling Panel on its 3 August meeting.

II. Wall Measurement Gauges

A. Ultra sonic thickness gauge

1. Mr. Wildhack, OBI, NBS, is doing an informal 3-4 months' study on ultra sonic thickness gauges. His conclusions will contain the feasibility of using ultra sonic gauges, types of equipment, and where equipment can be procured.

B. Neutron Backscattering Gauge

1. Mr. Wildhack, OBI, NBS, has information on a neutron backscattering device for wall measurements. This device, using a miniature Van der Graaf generator for power, is said to be more efficient than the radium beryllium type. Information on the neutron backscattering device will be given to CD.

[redacted] 25X1

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